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10/578,408

05/05/2006

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EXAMINER

ARCIERO, ADAM A

ART UNIT

PAPER NUMBER

1795

NOTIFICATION DATE

DELIVERY MODE

01/19/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/578,408 | Applicant(s) SUZUKI ET AL. | |
| | Examiner ADAM A. ARCIERO | Art Unit 1795 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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BATTERY HAVING COVER MEMBER IN BATTERY CASE

Examiner: Adam Arciero

S.N. 10/578,408

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January 5, 2010

DETAILED ACTION

1. The Applicant's amendment filed on October 28, 2009 was received. Claims 22-28 were canceled. Claims 12 and 17 have been amended. Claims 12-18 are currently pending.
2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in a prior Office Action.

Claim Rejections – 35 USC § 103

3. The claim rejections under 35 U.S.C. 103(a) as being unpatentable over HANAFUSA et al. and TERAHARA et al. on claims 12-15 and 17-28 are withdrawn, because the claims have been either canceled or amended.
4. The claim rejections under 35 U.S.C. 103(a) as being unpatentable over HANAFUSA et al., TERAHARA et al. and LAKE on claim 16 is withdrawn because independent claim 12 has been amended.

Claim Rejections - 35 USC § 103

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5. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu (JP 2000-123801 as found in IDS dated 05/05/2006) in view of Terahara et al. (US 6,379,846 B1).

As to Claim 12, Komatsu discloses a battery comprising an anode, cathode and separator as a power generating element and two cover members which cover part of said power generating element (Abstract and Fig. 1). Komatsu further discloses a battery case for accommodating said cover members and said power generating element, wherein said battery case comprises a laminate sheet of an aluminum foil and a sealant resin layer (Fig. 1, [paragraph [0014] and Abstract). Said cover members and said sealant layer is provided between said power generating element and said aluminum foil. Komatsu does not specifically disclose wherein said electrodes comprise non-coated portions.

However, Terahara et al. teaches of a nonaqueous electrolyte battery which comprises an anode sheet and a cathode sheet. The end parts of said anode and cathode comprise a non-coated part to which a nickel ribbon (for the anode) and an aluminum ribbon (for the cathode) (terminal leads) is welded to so as to provide a lead body for the emergence of current (col. 10, lines 30-46). At the time of the invention, it would have been obvious to one of ordinary skill in the art to provide a non-coated portion at the end of the cathode and anode of the battery of Komatsu et al. because Terahara et al. teaches that the terminal leads can be welded thereby giving an emergence of current from the battery (col. 10, lines 30-46). The non-coated portion of the battery of Komatsu in view of Terahara et al. is covered by the cover member because the cover member encompasses the ends power generating element of Fig. 1.

As to Claim 13, Komatsu discloses two cover members covering said power generating element, wherein said cover members are cup-shaped and wherein open sides of said cover members face each other (Fig. 1).

6. Claims 14-15 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu (JP 2000-123801 as found in IDS dated 05/05/2006) in view of Terahara et al. (US 6,379,846 B1) as applied to claims 12-13 above, and further in view of Hanafusa (US 2001/0051298 A1).

As to Claims 14-15, the combination of Komatsu and Terahara et al. does not specifically disclose wherein the lead terminals are held between two cover members. Komatsu discloses that said cover members are made of polypropylene ([0013]).

However, Hanafusa teaches a battery element which is covered by a cover member **6,8** and an aluminum foil barrier layer (fig. 36). Said cover members **6,8** are made of polypropylene and cover the entire power generating element as well as hold the lead terminals (Fig. 36 and [0221]). Hanafusa teaches of a cover member which is materially the same as that of Komatsu and serves the same purpose of covering said power generating element. It would have been obvious that the substitution of one known element for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

As to Claim 17, Komatsu discloses a battery comprising an anode, cathode and separator as a power generating element and two cover members which cover part of said power generating element (Abstract and Fig. 1). Komatsu further discloses a battery case for accommodating said cover members and said power generating element, wherein said battery

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case comprises a laminate sheet of an aluminum foil and a sealant resin layer (Fig. 1, [paragraph [0014] and Abstract). Said cover members and said sealant layer is provided between said power generating element and said aluminum foil. Komatsu does not specifically disclose wherein said electrodes comprise non-coated portions.

However, Terahara et al. teaches of a nonaqueous electrolyte battery which comprises an anode sheet and a cathode sheet. The end parts of said anode and cathode comprise a non-coated part to which a nickel ribbon (for the anode) and an aluminum ribbon (for the cathode) (terminal leads) is welded to so as to provide a lead body for the emergence of current (col. 10, lines 30-46). At the time of the invention, it would have been obvious to one of ordinary skill in the art to provide a non-coated portion at the end of the cathode and anode of the battery of Komatsu et al. because Terahara et al. teaches that the terminal leads can be welded thereby giving an emergence of current from the battery (col. 10, lines 30-46). The non-coated portion of the battery of Komatsu in view of Terahara et al. is covered by the cover member because the cover member encompasses the ends power generating element of Fig. 1.

The combination of Komatsu and Terahara et al. does not specifically disclose wherein said two cover members hold the lead terminals between each other and cover said power generating element. However, Hanafusa teaches a battery element which is covered by a cover member **6,8** and an aluminum foil barrier layer (fig. 36). Said cover members **6,8** are made of polypropylene and cover the entire power generating element as well as hold the lead terminals (Fig. 36 and [0221]). Hanafusa teaches of a cover member which is materially the same as that of Komatsu and serves the same purpose of covering said power generating element. It would have been obvious that the substitution of one known element for another would have yielded

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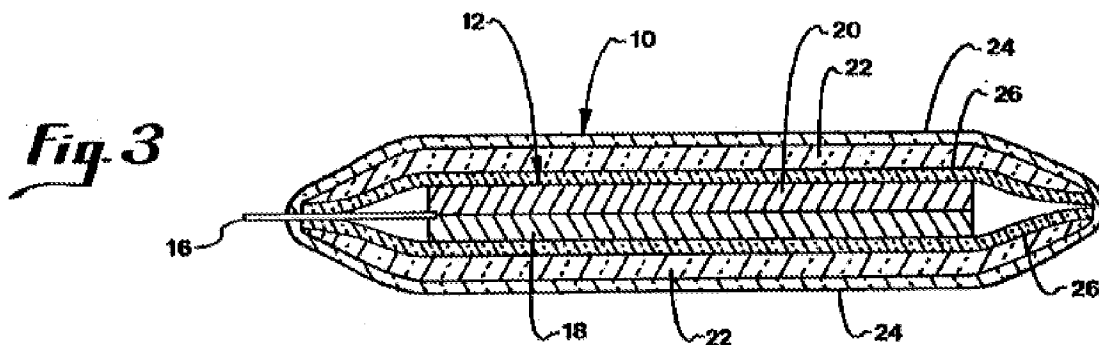
predictable results to one of ordinary skill in the art at the time of the invention.

As to Claim 18, Hanafusa et al. teaches wherein said cover-members **6,8** are cup-shaped and face one another to cover said power generating element (fig. 36).

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu (JP 2000-123801 as found in IDS dated 05/05/2006) in view of Terahara et al. (US 6,379,846 B1) as applied to claims 12-13 above, and further in view of Lake (US 5,326,652).

As to Claim 16, the combination of Komatsu and Terahara et al. does not expressly disclose wherein the superimposed portion of said two covers faces the non-coated portion and faces a superimposed portion of the flexible sheet, on the opposite side to the non-coated portion.

However, LAKE teaches a battery package **10** comprising a flexible base film **22** that covers and encloses the battery **12** and a flexible layer **24** of an inorganic material deposited on said base film **22** to enclose and seal the battery **12** (col. 3, lines 42-51 and Fig. 3). As can be seen in Figure 3 (shown below), the superimposed portion of said covers (base film) **22** faces the non-coated portion with one side. The opposite side of said superimposed portion of said covers **22** faces a superimposed portion of said flexible sheet **24**.



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At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the battery packaging of HANAFUSA et al. and TERAHARA et al. so as to have a superimposed portion of said two covers **22** facing both a non-coated portion and a superimposed portion of a flexible sheet **24**, because LAKE teaches that such a flexible composite package is impervious to gas and water vapor transmission as well as being able to be shaped to conform to an irregular or curved surface (col. 2, lines 47-54).

Response to Arguments

8. Applicant's arguments with respect to claims 12-18 have been considered but are moot in view of the new ground(s) of rejection as necessitated by Applicant's amendments to the claims.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADAM A. ARCIERO whose telephone number is (571)270-5116. The examiner can normally be reached on Monday to Friday 8am to 5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on 571-272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AA

/Dah-Wei D. Yuan/
Supervisory Patent Examiner, Art Unit 1795